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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,203	02/13/2004	Harald Hirschmann	MERCK-2835	5767
23599	7590	04/25/2006	EXAMINER	
MILLEN, WHITE, ZELANO & BRANIGAN, P.C. 2200 CLARENDON BLVD. SUITE 1400 ARLINGTON, VA 22201			WU, SHEAN CHIU	
			ART UNIT	PAPER NUMBER
			1756	

DATE MAILED: 04/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/777,203

Applicant(s)

HIRSCHMANN ET AL.

Examiner

Shean C. Wu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-9 and 12-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Kato et al. (US 5,709,820).

The reference discloses liquid crystalline compound represented by the formula

(I) having lower viscosity, higher elastic constant ratio and good compatibility with other liquid crystalline compounds at lower temperature. The compounds of formula (I) are useful in compositions for liquid crystal display devices such as guest-host (GH), NPCA,

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PDLCD, PNLCD, ECB and DS modes. The composition in Example 1 (bridging col. 28 and col. 29) comprises the compounds represented by formulae (I), II, IIIa, IIIb, Ta and Te. Also, see other composition examples in the reference. The reference compositions clearly anticipate the claimed mixture and device thereof.

4. Claims 1-9 and 12-16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over DE 4,414,647.

The reference provides stable LC or mesogenic compounds with relatively low viscosity and high nematogenicity, enabling the production of LC media with a wide nematic mesophase range, good optical and dielectric anisotropy and very good low-temperature properties. See the formulae I1 and I4 and the compounds on pages 14 and 15. The reference Example B comprises the present formulae I, II, IIA and IIIc. The reference Example G comprises the present formulae I, II, IIA and Ta. Also, see other Examples in the reference. The reference compositions anticipate the claimed mixture and device thereof.

With respect to Claim 2, if not anticipated because the claimed mixture is not exemplified by the reference examples. However, the compounds of claim 2 are disclosed by the reference on page 14. Therefore, it would have been obvious to those skilled in the art to substitute the compound having two alkenyl groups at both terminal end for one alkenyl group of formula I to arrive at the claimed invention.

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5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (US 5,709,820) or DE 4,414,647.

The references differ from the claim in that the claim has more specific elements for TN or STN display. Because these elements in TN or STN display device are known in the art (see US 6,555,186 and 6,440,506), it would have been obvious to those skilled in the art to utilize the reference nematic LC mixtures (US '820 and '647) in display of US '186 or US '506 to arrive at the claimed invention.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (US 5,709,820) or DE 4,414,647 in view of US 6,217,792.

The references differ from the claim in that the claimed device can be a CLC, SSCT or PSCT display comprising one or more chiral dopants and LC mixture. US '792 teaches that the chiral dopant added to nematic LC mixture is useful for STN, TN, AMD-TN, temperature compensation, guest-host or phase change displays, or polymer free or polymer stabilized cholesteric texture (PSCT) displays (see the abstract of US '792). Therefore, it would have been obvious to those skilled in the art to utilize the reference nematic LC mixtures (US '820 and '647) by adding a chiral dopant of US '792 in display devices such as PSCT to arrive at the claimed invention.

7. Claims 1, 3-5, 9 and 12-16 are rejected under 35 U.S.C. 103(a) as being obvious over Heckmeier et al. (US 20030186002).

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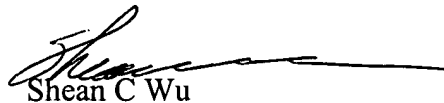
The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2). See the example M3 on page 40.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shean C. Wu whose telephone number is 571-272-1393. The examiner can normally be reached on 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shean C Wu
Primary Examiner
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SCW